In the Claims

1. (Currently amended) A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, ~~and~~ wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;

means for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block and removable for ease of filling the elongated wells; and

an outlet for discharge of vapor formed in the vaporizer communicatively connected to the removable sealing lid and the interior space.

2. (Original) The vaporizer of claim 1 further comprising a control mechanism for controlling temperature generated by the means for applying heat.

3. (Original) The vaporizer of claim 1 containing liquid source material.

4. (Original) The vaporizer of claim 1 containing solid source material.

5. (Previously presented) The vaporizer of claim 1 containing decaborane.

6. (Original) The vaporizer of claim 1 wherein at least four elongated wells are formed in the thermally conductive block.

7. (Original) The vaporizer of claim 1 wherein the means for applying heat to the thermally conductive block comprise at least one resistive heating element.

8. (Original) The vaporizer of claim 1 wherein each wall of the thermally conductive block has at least one resistive heating element attached thereto.

9. (Original) The vaporizer of claim 1 wherein the means for controlling temperature comprise a thermocouple.

10. (Original) The vaporizer of claim 6 wherein the means for controlling temperature are arranged to maintain the block at a sufficient temperature to vaporize the source material.

11. (Original) The vaporizer of claim 1 wherein the thermally conductive block is fabricated of aluminum or an aluminum alloy.

12. (Previously presented) The vaporizer of claim 6 wherein the thermally conductive block has an interior volume of about 160 cm^3.

13. (Original) The vaporizer of claim 12 wherein the multiplicity of elongated wells constitute an interior volume of about 60 cm^3.

14. (Original) The vaporizer of claim 1 wherein the thermally conductive block is uniformly heated, thereby reducing cold spots within the elongated wells and interior space.

15. (Withdrawn) A method for vaporizing a source material comprising the steps of:

introducing a source material into a multiplicity of elongated wells formed in a thermally conductive block, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vaporized source material, and wherein each elongated well consists of a closed end and a single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;

placing a sealing lid on the conductive block and sealing the thermally conductive block to form a vacuum in the multiplicity of wells and interior space;

applying heat to the thermally conductive block to heat the elongated wells and vaporize source material therein to form source material vapor that accumulates in the interior space; and

opening an outlet valve communicatively connected to the sealing lid and in fluid communication with the interior space for discharge of vapor for delivering source material vapor to a deposition system.

16 (Withdrawn) The method of claim 15 wherein the deposition system comprises a process unit selected from the group consisting of ion implantation units, chemical vapor deposition units, and metal organic chemical vapor deposition units.

17. (Withdrawn) The method of claim 15 further comprising controlling temperature generated by the step of applying heat.

18. (Withdrawn) The method of claim 15 wherein the source material is a liquid or a solid.

19. (Withdrawn) The method of claim 15 wherein the source material comprises decaborane.

20. (Withdrawn) The method of claim 15 wherein at least four elongated wells are formed within the thermally conductive block.

21. (Withdrawn) The method of claim 15 wherein the step of applying heat comprises resistively heating the thermally conductive block.

22. (Withdrawn) The method of claim 15 wherein temperature within the thermally conductive block is maintained at a sufficient temperature to vaporize the source material.

23. (Withdrawn) The method of claim 15 wherein the thermally conductive block is fabricated of aluminum or aluminum alloy.

24. (Withdrawn) The method of claim 15 wherein the thermally conductive block is uniformly heated, thereby reducing cold spots within the elongated wells and interior space.

25. (Currently amended) A vaporizing and deposition system comprising

a vaporizer comprising: a thermally conductive block having a multiplicity of stationary elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the

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thermally conductive block for accumulation of vapor, and wherein each elongated well consists of a closed end and a single opening in fluid communication with the interior space;

means for applying heat to the thermally conductive block to vaporize the source material;

a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block and removable for ease of filling the elongated wells;

an outlet positioned in the removable sealing lid for discharge of vapor formed in the vaporizer in fluid communication with ~~communicatively connected to the removable sealing lid and~~ the interior space.

26. (Original) The system of claim 25 wherein the source material directly contacts interior surfaces of elongated wells.

27. (Previously presented) The vaporizer of claim 1, wherein the thermally conductive block is fabricated of a suitable heat-conducting material.

28. (Previously presented) The vaporizer of claim 27, wherein the heat conducting material is selected from the group consisting of silver, silver alloys, copper, copper alloys, aluminum, aluminum alloys, lead, nickel clad, stainless steel, graphite and ceramic material.